

**WORKPLACE
HEALTH AND
SAFETY**

**TRANSFER
STATIONS**

Shawn Barth

Industrial Hygienist

802-793-5072

Project WorkSAFE

Vermont Department of Labor



1-888-SAFE-YES

Project Work**SAFE** is a FREE and confidential service available to VT small businesses INCLUDING PUBLIC SECTOR(< 250 employees)

Free Safety and Health Consultations

Range of Service

- Full visits / Limited visits / Training
- Chemical and Noise Exposure monitoring
- Phone / E-mail Q and A
- Safety & Health program development, assistance, & evaluation



A cooperative program between:

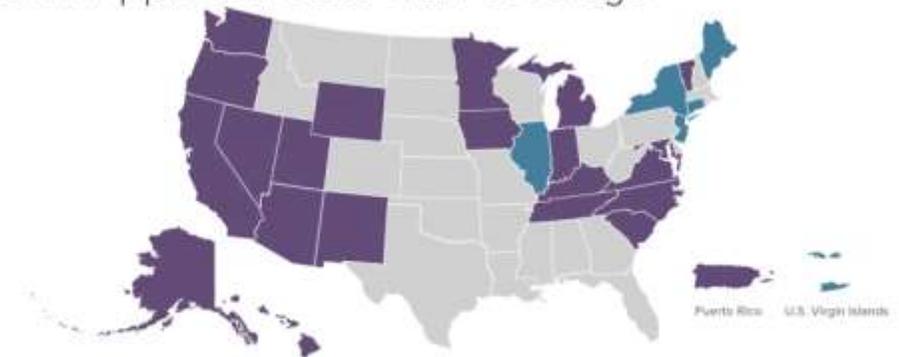


Department of Labor
State of Vermont

and



OSHA-Approved State Plan Coverage



1-888-SAFE-YES

- **Requirements**

- Request for assistance / visit made by employer
- Consultants allowed to speak with employees
- Agree to fix any serious hazards found
(45 – 60 days from date on site)
- Must Tell us when serious hazard was corrected
Referral to VOSHA if you do not
- No assistance during your compliance inspection
Plan ahead – Consultants often booked out 4 - 6 weeks

Safety and Health

What is being accounted for?

Hazard is the source of harm

Actual harm only occurs when there is exposure.

Risk is the likelihood of actual harm.



How to Interpret Risks and Hazards?

TABLE 1-1. Example Risk Assessment Matrix (adapted from Department of Defense MIL-STD-882E Standard Practice for System Safety)^(1.1)

RISK ASSESSMENT MATRIX				
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Eliminated (F)	Eliminated			

SEVERITY CATEGORIES		
Description	Severity Category	Mishap Result Criteria
Catastrophic	1	Could result in one or more of the following: death, permanent total disability, irreversible significant environmental impact, or monetary loss equal to or exceeding \$10M.
Critical	2	Could result in one or more of the following: permanent partial disability, injuries or occupational illness that may result in hospitalization of at least three personnel, reversible significant environmental impact, or monetary loss equal to or exceeding \$1M but less than \$10M.
Marginal	3	Could result in one or more of the following: injury or occupational illness resulting in one or more lost work day(s), reversible moderate environmental impact, or monetary loss equal to or exceeding \$100K but less than \$1M.
Negligible	4	Could result in one or more of the following: injury or occupational illness not resulting in a lost work day, minimal environmental impact, or monetary loss less than \$100K.

PROBABILITY LEVELS		
Description	Level	Specific Individual Item
Frequent	A	Likely to occur often in the life of an item
Probable	B	Will occur often in the life of an item
Occasional	C	Likely to occur sometime in the life of an item
Remote	D	Unlikely, but possible to occur in the life of an item
Improbable	E	So unlikely, it can be assumed occurrence may not be experienced in the life of an item
Eliminated	F	Incapable of occurrence. This level is used when potential hazards are identified and later eliminated

Evaluating Risk

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Controlling COVID-19 in the Workplace

Apply the Hierarchy of Controls

Focus on the most effective methods first and then move on to the next level of control. **In all cases practice physical distancing, hand hygiene, and respiratory etiquette.**

Most effective

ELIMINATION

SUBSTITUTION

ENGINEERING CONTROLS

ADMINISTRATIVE CONTROLS

PPE & NMM

Least effective

Elimination and Substitution

- Allow workers to work remotely where and if possible.
- Assess the need to report to the workplace in person on an individual or job role basis.
- People with immunocompromising health conditions (including chronic conditions such as diabetes, heart and lung issues, or cancer) or who live with immunocompromised individuals may need to continue to work remotely.
- Use technologies to facilitate working remotely, such as teleconferencing.

Personal Protective Equipment



Respirators



Face Shields



Gowns

Engineering Controls

- Physical barriers.
- Increased ventilation and high efficiency filters.
- Sensors or no- or low-touch controls for water taps, doors, and garbage lids.

Administrative Controls

- Communicate risks and rules.
- Limit occupancy, stagger shifts/teams.
- Use electronic communications for sign-ins and administrative work.
- Screen workers and/or customers.
- Clean and sanitize frequently.
- Practice physical distancing, hand hygiene, and respiratory etiquette.
- Change work practices to encourage physical distancing.

Non-Medical MASKS

- Non-medical masks are NOT personal protective equipment.
- Follow advice from your public health agency about when to use a non-medical mask.
- If your mask becomes damaged, wet or dirty, replace it with a fresh one.
- Wearing a non-medical mask or face covering is recommended when you cannot consistently keep 2 metres away from others, especially in crowded settings.
- Wearing a mask alone will not prevent the spread of COVID-19, but it can help. Continue to practice physical distancing and good hygiene.

Hazards among Transfer Stations?

Heavy Equipment

Compactors/Hazardous Machinery*

Weather*

Chemicals (eWaste, batteries, etc.)*

Bloodborne Pathogens/Infectious Material*

Heavy/Awkward Postures (Musculoskeletal Disorders)

Atmospheric Contaminants (Deisel Exhaust, Mold)

People

Cars

Walking/Working Surfaces(Slips/Trips/Falls)

Fall Hazards

Sharp Objects

Hazardous Noise*

Preventable?



East Millinocket Police Department

April 1 · 🌐

Things you don't see everyday. Today the East Millinocket Police Department and the Millinocket Fire Department were called to the Millinocket Transfer Station for a vehicle reported to be in the trash hopper / compactor and the occupant was still in the vehicle.

Upon arrival we found the operator was unable to get out of the vehicle because the vehicle was hanging over the hopper / compactor. Millinocket Fire was able to safely remove the operator and thankfully the operator was uninjured.

Due the position of the vehicle, the worries of fuel tank rupture and further damage a heavy duty wrecker and boom was requested to remove the vehicle.

We appreciate the assistance of [Bouchard & Sons Towing](#) in the recovery of the vehicle and without causing any further damage to the vehicle or the transfer station.

The transfer station did need to be closed during recovery but will be open tomorrow at their normal time.



Most Frequently Cited Regulations Vermont

NAICS Code: *5621 Waste Collection*

Establishment Size: *ALL sizes*

Listed below are the standards which were cited by **Vermont OSHA** for the 5621 NAICS Code for establishments with ALL sizes employees, that were **issued** during the period October 2020 through September 2021. Penalties shown reflect current rather than initial amounts. For more information, see [definitions](#).

NAICS

Standard	Citations	Inspections	Penalty	Description
Total	3	1	\$16,383	<i>All Standards cited for Waste Collection</i>
19100132	1	1	\$8,192	General requirements.
19100147	1	1	\$0	The control of hazardous energy (lockout/tagout).
VT STATU	1	1	\$8,192	--- No Description Found ---

VOSHA Inspections

NAICS 562111; Solid Waste Collection

	#	Activity	Opened	RID	St	Type	Sc	SIC	NAICS	Vio	Establishment Name
<input type="checkbox"/>	1	1546908.015	08/06/2021	0155010	VT	Fat/Cat	Partial		562111	2	
<input type="checkbox"/>	2	1461600.015	02/07/2020	0155010	VT	Fat/Cat	Complete		562111	2	
<input type="checkbox"/>	3	1457437.015	01/23/2020	0155010	VT	Planned	Complete		562111	3	
<input type="checkbox"/>	4	<u>1294623.015</u>	02/13/2018	0155010	VT	Complaint	Partial		562111		
<input type="checkbox"/>	5	1274855.015	11/02/2017	0155010	VT	Complaint	Partial		562111		
<input type="checkbox"/>	6	1254515.015	08/11/2017	0155010	VT	Fat/Cat	Partial		562111		
<input type="checkbox"/>	7	1238533.015	06/08/2017	0155010	VT	Planned	Complete		562111	2	
<input type="checkbox"/>	8	1192275.015	11/10/2016	0155010	VT	Referral	Partial		562111	1	
<input type="checkbox"/>	9	1192283.015	11/10/2016	0155010	VT	Referral	Partial		562111	1	
<input type="checkbox"/>	10	1117341.015	01/12/2016	0155010	VT	Referral	Partial		562111		
<input type="checkbox"/>	11	316749688	06/24/2014	0155010	VT	Complaint	Partial	4212	562111		

Vermont Fatalities among NAICS 562111; Solid Waste Collection

Accident Investigation Summary

Summary Nr: 123861.015

Event: 02/05/2020

Employee Sustains Blunt Force Trauma To Neck And Torso When

At 12:30 p.m. on February 5, 2020, an employee was emptying a 6yd dumpster when the lifting cable broke and the employee was struck by the dumpster. The employee was crushed and sustained blunt force trauma to his torso and neck, killing him.

Accident Investigation Summary

Summary Nr: 138451.015

Event: 08/05/2021

Employee Is Killed When Crushed Between Two Dumpsters

At 07:00 p.m. on August 05, 2021, an employee was loading a dumpsters onto a flatbed truck. While attempting to load a second dumpster, the first dumpster on the raised bed of the truck broke free and trapped the employee between the two. The cause of death was determined to be asphyxia and a crushed chest.

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Eliminated (F)	Eliminated			

What is OSHA/VOSHA citing?

- NAICS 562111; Solid Waste Collection

NAICS Code: 5621 *Waste Collection*

Establishment Size: ALL sizes

Listed below are the standards which were cited by **Federal OSHA** for the 5621 NAICS Code for establishments with ALL sizes employees, that were **issued** during the period October 2021 through September 2022. Penalties shown reflect current rather than initial amounts. For more information, see [definitions](#).

OSHA-Approved State Plan Coverage



- OSHA-approved state plans that cover both private and state and local government workers
- OSHA-approved state plans that cover state and local government workers only; private-sector workers are covered under federal OSHA
- No state plan coverage; covered by federal OSHA

Source: Occupational Safety and Health Administration.

NAICS

Standard	Citations	Inspections	Penalty	Description
Total	75	22	\$498,510	<i>All Standards cited for Waste Collection</i>
19100147	15	5	\$159,376	The control of hazardous energy (lockout/tagout).
19101200	12	4	\$7,678	Hazard Communication.
19100146	10	1	\$192,878	Permit-required confined spaces
19040039	5	4	\$6,800	— No Description Found —
19100132	3	3	\$22,789	General requirements.
19100157	3	3	\$2,486	Portable fire extinguishers.
19100178	3	3	\$16,986	Powered industrial trucks.
19100212	3	2	\$2,000	General requirements for all machines.
19040029	2	2	\$1,500	Forms.
19100303	2	1	\$1,492	General.
5A0001	2	2	\$15,836	OSH Act General Duty Paragraph

General Duty Clause

Section 5 of the Occupational Safety and Health Act of 1970

- (a) Each employer:

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

General Duty Clause Example

Inspection: 1530847.015 - City Recycling Corp.

Inspection Information - Office: Manhattan

Penalty and Failure to Abate Event History

Type	Event	Date	Penalty	Abatement	Type	FTA Insp
Penalty	Z: Issued	09/24/2021	\$9,557.00	10/01/2021	Serious	
Penalty	I: Informal Settlement	10/26/2021	\$6,200.00	10/01/2021	Serious	

Text For Citation: 01 Item/Group: 001 Hazard:

Section 5(a)(1) of the Occupational Safety and Health Act of 1970: The employer did not furnish employment and a place of employment which were free from recognized hazards that were causing or likely to cause death or serious physical harm to employees in that employees were exposed to being struck by and/or caught in between heavy equipment and/or vehicles. a) Tipping area: An employee was exposed to the hazards of being struck by and/or caught in between heavy equipment and/or vehicles while on foot performing functions, including but not limited to: backing roll-off trucks, and opening and closing trucks' roll-off container gates. On or about 05/05/2021. Abatement Note: among other method: one feasible and acceptable method to correct this hazard is to: Follow ANSI Z245.42 - 2012, "American National Standard for Equipment Technology and Operations for Wastes and Recyclable Materials Waste Transfer Station-Safety Requirements", under 7.3.3.11, which states: "Employers and facility operators shall train their employees in operational procedures to ensure that employees are aware of the hazards of vehicular traffic in and around the facility. Training shall include at a minimum: 1) General operations which include Traffic flow/routes; Traffic signals/markings; Public/commercial traffic routes; Hazards, common mishaps, accidents, unsafe practices and Accident Reporting. 2) Vehicle types which include External/contractors and Internal/powered industrial trucks. 3) Pedestrian routes/walkways. 4) Railway traffic (if applicable). 5) Safety rules and regulations which include Employee visibility, including requirements for wearing enhanced visibility clothing."

ANSI Z245.42 - 2012

American National Standard



ENVIRONMENTAL INDUSTRY ASSOCIATIONS

for Equipment Technology and Operations for Wastes and Recyclable Materials: Waste Transfer Station — Safety Requirements



WASTE EQUIPMENT TECHNOLOGY ASSOCIATION
A PART OF THE
ENVIRONMENTAL INDUSTRY ASSOCIATIONS

4301 CONNECTICUT AVENUE, NW • SUITE 500 • WASHINGTON, DC 20008
TELEPHONE: 202-244-4700 • FAX: 202-966-4824

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Stationary Compactors

American National Standard



ENVIRONMENTAL INDUSTRY
ASSOCIATIONS

*for Equipment Technology and
Operations for Wastes and
Recyclable Materials -*

***Stationary Compactors –
Safety Requirements for Installation,
Maintenance and Operation***

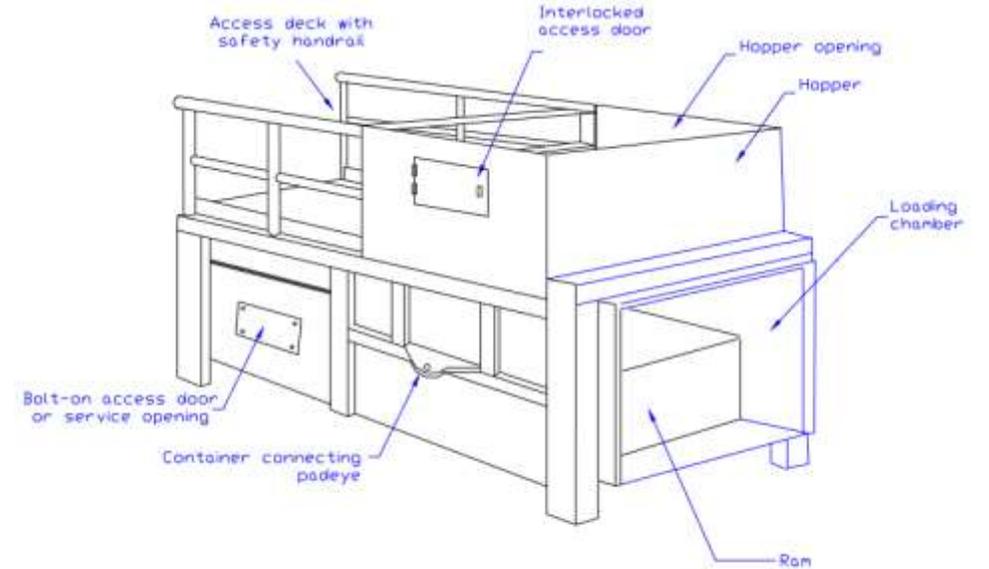


Figure 2 — Commercial/industrial stationary compactor (shown with optional accessories)

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Lockout/Tagout Stationary Compactors

“The owner/employer shall have a hazardous energy control (lockout/tagout) procedure to follow when performing servicing and maintenance on stationary compactors where the unexpected energization or start up of equipment, or release of stored energy could cause injury to employees.”

“The owner/employer shall utilize the instructions provided by the manufacturer for the control of hazardous energy sources.”

“The lockout/tagout procedure shall isolate and render safe all energy sources, including electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other potential sources of energy (e.g., gravity, kinetic, etc.). It shall be used to ensure that the compactor is stopped, isolated from all potentially hazardous energy sources and locked out before employees perform any servicing or maintenance where the unexpected energization or start-up of the compactor or release of stored energy could cause injury”.



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What do vehicles and stationary compactors have in common?

- Both yield catastrophic/critical severity with frequent or probable probability

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Example Procedure

LOCKOUT TAGOUT SEQUENCE	
Step	Description
1. Notify Employees	Notify affected employees working in the vicinity the of LOTO activity.
2. Equipment Shutdown	Turn key switch to the "Off" position. 
3. Isolate Energy	Turn disconnect to the "Off" position and perform LOTO.
4. Lockout Energy	Lockout and tagout the disconnect.
5. Dissipate Energy	Verify that there is no hydraulic pressure on the compactor by observing the pressure gauge reads zero and/or by verifying the hydraulic lines are limp. If pressure is still on the system, push the pressure relief button for the hydraulic cylinder. Disconnect the hydraulic hoses. 
6. Verify Isolation	Turn key switch to the "On" position to verify isolation. Verify "Emergency Stop" is pulled out and press "Forward". Compactor will not start if isolation has been achieved.
7. Perform work	The equipment is locked out. Perform work.



Weather

Appendix A: Target Industries for the Heat NEP

4881	Support Activities for Air Transportation
4882	Support Activities for Rail Transportation
4883	Support Activities for Water Transportation
4884	Support Activities for Road Transportation
4889	Other Support Activities for Transportation
4921	Couriers and Express Delivery Services
4922	Local Messengers and Local Delivery
4931	Warehousing and Storage
5311	Lessors of Real Estate
5617	Services to Buildings and Dwellings (includes landscaping services, tree removal and tree trimming services)
5621	Waste Collection
5622	Waste Treatment and Disposal
5629	Remediation and Other Waste Management Services
6231	Nursing Care Facilities (Skilled Nursing Facilities)
7211	Traveler Accommodation
8111	Automotive Repair and Maintenance

Heat

More frequent hot days (>87 degrees F).

High temperatures can interfere with our natural ability to dissipate heat leading to a variety of outcomes serious bodily damage.

The New York Times

Work Injuries Tied to Heat Are Vastly Undercounted, Study Finds

New data underline how heat waves can hurt people, especially the poorest workers, in unexpected ways.



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Acute hazard characteristics unlike other focus four hazards.

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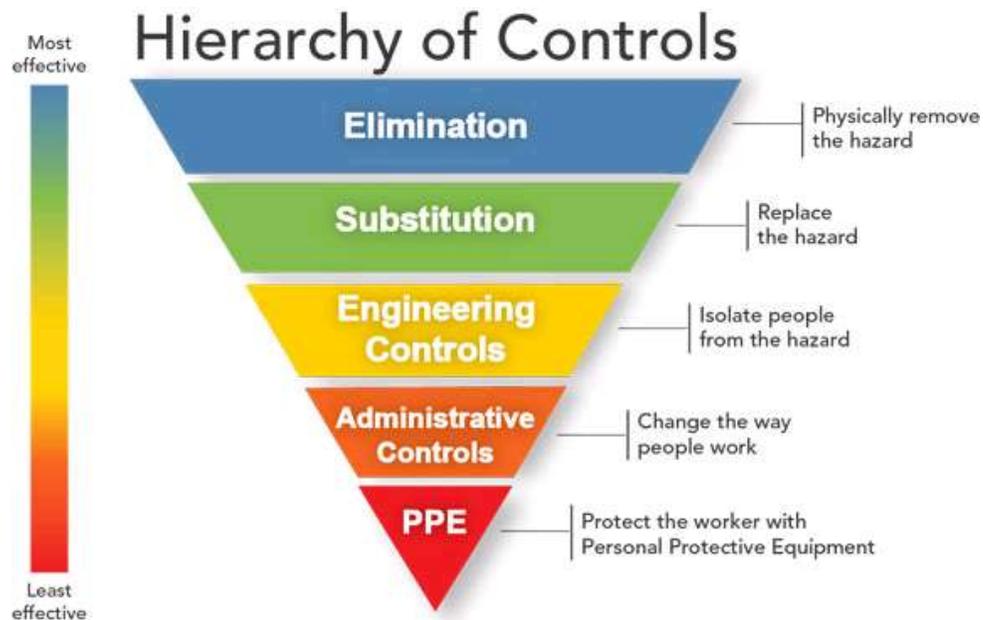
Heat Illness Prevention

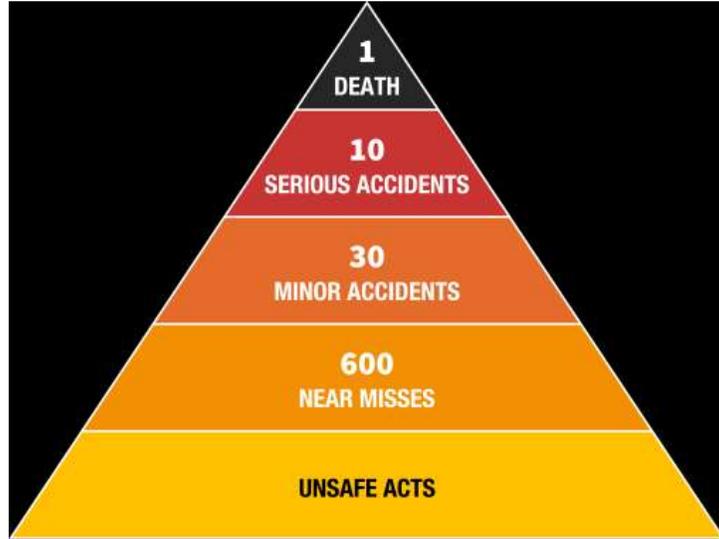
Heat Index
Equal to or above 80 degrees
(F)

Heat Index
Greater than 90 degrees (F)

- Access to sufficient shade
- An adequate supply of drinking water
- Effective employee/supervisor communication is maintained so that an employee can report concerns.
- Implement one of the following.
 1. Regular communication via radio, cell phone or other means.
 2. Create a mandatory buddy system.
 3. Other equally effective means of observation and communication.

- Direct employees or supervisors to call emergency services as necessary.
- Develop and implement a designated work/rest schedule according to three options listed in the standard.
- Develop a Heat Illness Prevention Plan
- Active employee surveillance for signs and symptoms of heat illness.
- Provide a cool-down rest period(s) in the shade (can be provided concurrently with any other meal or rest period required by policy, rule, or law)
- Develop and implement an emergency medical plan and practices to gradually adapt employees to working in the heat.
- Provisions also provided for hot indoor environments indoor work





SAFETY PYRAMID

It is far better to be reporting and learning from Near Misses, Minor Incidents and Hazards, where there is little or no loss, than to be reporting actual serious losses.

